



Nebraska

# Epidemiology

**TO:** Nebraska Healthcare Providers  
**FROM:** Thomas J. Safraneck, M.D., State Epidemiologist (402-471-0550)  
**DATE:** August 11, 2005  
**RE:** Surveillance for Enterovirus/West Nile Virus, Nebraska, 2005

Surveillance reports indicate a recent marked increase in enterovirus infections in Nebraska. At the same time, human, insect, and veterinary surveillance systems indicate the return of WNV. This could provide a diagnostic challenge. Useful testing points would include the following:

***In children***, when clinically indicated, order CSF PCR for enterovirus. Collect an extra 1 cc of CSF for WNV IgM ELISA, to be run if enterovirus PCR is negative. Serum IgM/IgG for WNV should also be run if WNV is being considered.

***In adults***, when clinically indicated, order CSF for WNV IgM ELISA, and serum IgM/IgG. Collect an extra 1 cc of CSF for enterovirus PCR, to be run if WNV tests are negative.

**Physicians who order and interpret WNV tests should follow these guidelines:**

- Only a laboratory test will differentiate WNV disease from enterovirus disease.
- Order BOTH serum IgM and IgG antibodies. If WNV meningitis or encephalitis is suspected, order a spinal fluid IgM antibody in addition to serum antibodies.
- Because serum IgM antibody can persist for up to 500 days in some patients, when a patient tests positive for both IgM and IgG antibodies, collect a "convalescent" serum (>14 days following the initial specimen) for IgM/IgG.
- Serum testing positive for IgM & negative for IgG is consistent with acute WNV infection. The combination of a positive IgG & negative IgM antibody is consistent with infection in the distant past, and is not consistent with acute infection. CSF testing positive for IgM is consistent with acute meningitis/encephalitis.

An article in the August 2005 Emerging Infectious Diseases Journal provides current clinical and epidemiologic information regarding "WNV: Virology, Pathology, and Clinical Manifestations of West Nile Virus Disease"

<http://www.cdc.gov/ncidod/EID/vol11no08/05-0289b.htm>

Costs for WNV testing in persons with suspected neuroinvasive disease will be covered by Nebraska Health & Human Services, provided the specimens are tested through the Nebraska Public Health Laboratory using an NPHL requisition. Please report all cases of WNV to your local or state health department. For more detailed information & the NPHL laboratory requisition, go to:

<http://www.hhs.state.ne.us/puh/epi/wnv/healthpros.htm>